

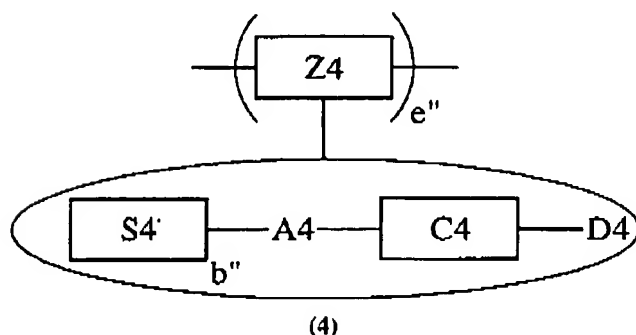
Application No. 10/828,973

# **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-9 (canceled).

10. (currently amended) A composition comprised of a liquid crystal and a compound having formula (4)



wherein:

D4 is an electron donor moiety which possesses a negative Hammett constant;

C4 is a conjugated bridging moiety which is one aromatic ring;

A4 is an electron acceptor moiety;

S4 is a liquid crystal compatibilizing moiety;

b'' is an integer;

Z4 is a polymerizable moiety; and

e'' is the degree of polymerization

wherein D4 is selected from the group consisting of:

(a) an atom selected from the group consisting of N, O, S, and P where the valence of the atom is satisfied by bonding with C4 and optionally with Z4;

(b) an atom selected from the group consisting of N, O, S, and P bonded to C4, and optionally with Z4, where the atom also is bonded to at least one other moiety to satisfy the valence of the atom;

(c) ferrocenyl;

(d) azulenyl; and

(e) at least one aromatic heterocyclic ring.

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Claim 11 (canceled).

Claim 12 (canceled).

13. (original) The composition of claim 10, wherein A4 is selected from the group consisting of:

- (a) a carbonyl group;
- (b) a carboxyl group;
- (c) a sulphone;
- (d) an alkene; and
- (e) an imine group.

14. (original) The composition of claim 10, wherein S4 is a hydrocarbon selected from the group consisting of:

- (a) a straight chain alkyl group;
- (b) a branched alkyl group;
- (c) at least one cycloalkyl group, optionally substituted with an alkyl group, an arylalkyl group, an alkylaryl group, a cycloalkyl group, or an alkylcycloalkyl group; and
- (d) an arylalkyl group or an alkylaryl group.

Claim 15 (canceled).

16. (original) The composition of claim 10, wherein Z4 is selected from the group consisting of:

- $\text{H}_2\text{C}=\text{CH}-\text{C}(\text{O})-\text{O}-$  (acryl),
- $\text{H}_2\text{C}=\text{C}(\text{CH}_3)-\text{C}(\text{O})-\text{O}-$  (methacryl),
- $\text{H}_2\text{C}=\text{C}(\text{C}_2\text{H}_5)-\text{C}(\text{O})\text{O}-$  (ethacryl),
- $-\text{CH}=\text{CH}_2$  (vinyl), and
- $-\text{C}(\text{CH}_3)=\text{CH}_2$ .

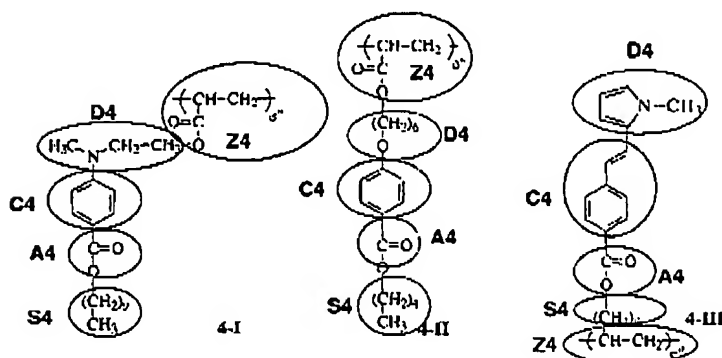
17. (original) The composition of claim 10, wherein Z4 includes a substitution with a moiety selected from the group consisting of:

- (a) an alkyl chain; and

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(b) a substituted alkyl chain selected from the group consisting of: an alkoxy, a halide substituted alkyl group, and an amino-alkyl group.

18. (currently amended) The composition of claim 10, wherein the compound of formula (4) is selected from the group consisting of 4-I and 4-II but excluding 4-III:



wherein S4, A4, C4, D4, and Z4 are indicated.